

Application Serial No.: 09/681,913
Attorney Docket No.: 57761.000084

REMARKS

Claims 1-37 are pending in the application. By this Amendment, claim 3 is amended. Reconsideration and allowance in view of the foregoing amendments and following remarks are respectfully requested.

No new matter has been added by this Amendment.

A. The 35 U.S.C. 112, second paragraph, Rejection

The Office Action rejects claims 1-17 and 35-37 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action asserts that in claim 1, "determining loading of the operating system based on the user interface" is indefinite because it does not make sense that the loading of the operating system be based on the user interface; instead, it should be based on the parameters of the user interface? The Office Action asserts that claims 13, 35, and 37 are rejected for the same reasons as stated in the rejection of claim 1.

Applicant respectfully submits that this rejection is based on a misinterpretation of the claimed language statement. The language "determining loading of the operating system based on the user interface" is merely another way of saying that a user observes the loading by looking at the information displayed by the user interface. It would certainly have been appreciated by the one of ordinary skill in the art that obviously the controller loading does not derive from the user interface. The Examiner is respectfully requested to reconsider this rejection of claim 1, and the other rejected claims. Applicant submits that such language clearly satisfies the requirements of 35 U.S.C. §112.

The Office Action further rejects claim 3 under 35 U.S.C. 112, second paragraph, as

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being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections, See MPEP §2172.01. The Office Action asserts that there is no structural relationship between the "processing time using a system of charts" (in claim 3) and the monitoring, scheduling, or adjusting of tasks (in claim 1).

Claim 3 is amended to provide structural interrelationship between claim 3 and claim 1. Accordingly, it is submitted that the claims satisfy all formal requirements under 35 U.S.C. §112.

B. The 35 U.S.C. §102 Rejection

In the Office Action, claims 1, 2, 18, 20, 21, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (hereinafter Lee) (US 6,263,358). This rejection is respectfully traversed.

Claim 1 recites a method of monitoring and scheduling tasks in an operating system, the method comprising the steps of obtaining task information relating to tasks processed in the operating system; generating a user interface based on the obtained task information, the user interface displaying parameters related to the task information; determining loading of the operating system based on the user interface; and adjusting the scheduling of tasks based on the loading of the operating system.

The Office Action asserts that as to claim 1, Lee teaches a method of monitoring and scheduling tasks in an operating system (col. 7, lines 30-45), the method comprising the steps of obtaining task information relating to tasks processed in the operating system (Col. 7, lines 29-35), generating a user interface based on the obtained task information (col. 22, lines 813 and col. 7, lines 35-40), the user interface displaying parameters related to the task

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information (col. 7, lines 30-40), determining loading of the operating system based on the user interface (col. 7, lines 30-35), and adjusting the scheduling of tasks based on the loading of the operating system (col. 7, lines 38-45).

In the Abstract, Lee teaches that a community of collaborative software agents works together in a domain to provide functionality such as provision of communications services or control of a chemical process. A scheduler is built into each collaborative agent which schedules tasks allocated to that particular agent and tasks sub-allocated by that agent. Lee teaches that the scheduler has a mechanism for over-booking tasks for any one agent.

In column 3, Lee teaches that the disclosed software module is capable of having loaded therein more than one collaboration or co-ordination strategy such that its collaboration or co-ordination behavior in the system is flexible. That is, it can operate according to one collaboration or co-ordination strategy at one time and another collaboration or co-ordination strategy at another time.

Further, in column 3, lines 30-46, there is described a software module for use in a software system for distributed control, monitoring and/or management of a process or apparatus, the module comprising: (i) communication means for communicating with other software modules; (ii) executable software for use in co-ordinating with other software modules in the selection of tasks to be allocated to respective software modules for controlling or carrying out; and (iii) a data store, or access to a data store, for storing task definitions including time data indicating task execution times, said module further comprising scheduling means for storing data selected from at least one of said task definitions, including said time data for the respective task definition or definitions. Lee describes that this scheduling means can be used by the software system for allocating tasks

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amongst a plurality of software modules during control, monitoring and/or management of a process or apparatus.

In column 3, line 62 - column 4, line 17, Lee teaches there is provided a visualisation arrangement for use in a software system for controlling, monitoring or managing a process or arrangement, said software system comprising a plurality of software modules provided with means to communicate with each other, wherein the visualisation arrangement comprises means to store and provide for display communication instances, or data relating thereto, occurring in relation to a single, selected software module, and means to store and provide for display communication instances, or data relating thereto, occurring between at least two of said software modules. Lee further teaches that preferably, the visualisation arrangement is provided with means for obtaining organisational data in relation to the software modules, and with means for processing the communications instances or data prior to display, such that said communications instances, or data relating thereto, can be displayed in a manner determined by the organisational data (column 4, lines 11-16).

Further, the Office Action in particular notes column 7 of Lee. In column 7, lines 30-55, Lee teaches that the internal structure of the single collaborative agent may comprise ... (v) a planner and scheduler 220 which plans and schedules the tasks the agent is controlling, monitoring or managing based on decisions taken by the co-ordination engine and reasoning system 210 and the resources and tasks available to be controlled, monitored and/or managed by the agent; (vi) a resource database 225 containing logical descriptions of the resources currently available to the agent; and providing an interface between the database and external systems such that the database can query external systems about the availability or resources and inform external systems when resources are no longer needed by the agent, and external

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systems can on their own initiative add, delete or modify resource items in the database, thus initiating changes in the agent's behaviour; (vii) a task database 230 which provides logical descriptions of tasks available for control, monitoring and/or management by the agent; and (viii) an execution monitor 235 which starts, stops, and monitors external systems tasks scheduled for execution or termination by the planner and scheduler, and which informs the co-ordination engine and reasoning system 210 of successful and exceptional terminating conditions to the tasks it is monitoring.

However, it is respectfully submitted that Lee fails to teach or suggest the particulars of claim 1. Specifically, claim 1 recites determining loading of the operating system based on the user interface; and adjusting the scheduling of tasks based on the loading of the operating system. Accordingly, such language sets forth a particular interrelationship between the determination of the loading, the user interface and the adjusting the scheduling of tasks. Lee fails to teach this arrangement. Instead, for example, Lee in column 7, line 36-45 (referenced in the Office Action) talks to resource items, for example.

Also, for example, Lee teaches in column 19, lines 31-39, aspects of the Lee invention relating to planning. Specifically, Lee teaches that once planning has taken place, the planner tentatively books the planned schedule into the commitment table. On receipt of a confirmation of the booking from the coordination engine, the schedule will be firmly booked and the tasks made ready for execution at their scheduled times. Lee describes that this use of tentative and firm booking gives the coordination engine time to delegate external subgoals required to achieve a goal, and also the ability to cancel commitments. However, this teaching of Lee also fails to teach or suggest the particular interrelationship between the determination of the loading, the user interface and the adjusting the scheduling of tasks, as

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recited in claim 1.

Based on the reasons set forth above, withdrawal of the rejection of claim 1 is respectfully requested. Further, it is respectfully submitted that claims 18 and 35 recite patentable subject matter for reasons similar to claim 1.

Further, the various dependent claims recite patentable subject matter for their various dependencies on the independent claims, as well as the additional subject matter such dependent claims recite. Withdrawal of the rejection under 35 U.S.C. §102 is respectfully requested.

C. The 35 U.S.C. §103 Rejection

In the Office Action, claims 3-17, 19, 22-34, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Dentler et al. (hereinafter Dentler) (US 6,289,368). This rejection is respectfully traversed.

With reference to independent claim 13, the Office Action asserts that Lee teaches a method of monitoring and scheduling tasks in an operating system, the method comprising the steps of obtaining task information relating to tasks processed in the operating system (col. 7, lines 2935), generating a user interface based on the obtained task information (col. 22, lines 8-13 and col. 7, lines 35-40), the user interface displaying parameters related to the task information (col. 7, lines 30-40), determining loading of the operating system based on the user interface (col. 7, lines 30-35), and adjusting the scheduling of tasks based on the loading of the operating system, wherein the operating system includes a tool and a controller, and the tasks are processed in the controller and the user interface is generated by the tool (col. 7, lines 38-45, col. 1, lines 47-58, col. 34, lines 53-67). The Office Action asserts that Lee fails to explicitly teach the task information based on a system of charts.

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However, the Office Action asserts that Dentler teaches using a system of charts to represent processing time and refers to the Abstract of Dentler. The Office Action then asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a system of charts to represent processing time in order to graphically display the status and other information of the processes (see Abstract). These assertions are respectfully traversed.

Dentler teaches a method and apparatus for graphically indicating the status of one or more computer processes. Dentler describes that the processes can be batch or online processes, which can be scheduled for, executing or abended on a mainframe computer or distributed computer system. Flowcharts or milestone charts are provided to graphically display to the user the status of one or more processes. Information regarding the relationships between processes is also provided. Dentler further teaches that color may be employed to indicate the status of a particular process.

However, Applicant respectfully submits that even if it were obvious to somehow combine the teachings of Lee with Dentler, as proposed in the Office Action, such combination would fail to remedy the deficiencies of Lee as discussed above. That is, it is respectfully submitted that Lee and Dentler, either alone or in combination, fail to teach or suggest the features of claim 13, for example, that recites determining loading of the operating system based on the user interface; and adjusting the scheduling of tasks based on the loading of the operating system, wherein the operating system includes a tool and a controller, and the tasks are processed in the controller and the user interface is generated by the tool.

Withdrawal of the rejection of claim 13 is respectfully requested. Further, it is respectfully submitted that claims 29 and 37 recite patentable subject matter for reasons

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similar to claim 13. Further, the various dependent claims recite patentable subject matter for their various dependencies on the independent claims, as well as the additional subject matter such claims recite.

For example, claim 5 recites particulars relating to a primary chart, a secondary chart and a tertiary chart, and specifics of the relationship between the charts. The Office Action's assertions on page 5, paragraph 14 are respectfully traversed. The Office Action appears to assert that because Lee and Dentler teach a variety of graphs and charts, that as a result, any chart arrangement would have been obvious. Such analysis of course can not fairly support the rejection under 35 U.S.C. §103. The features of claim 5 in particular provide the time domain inter-relationship between tasks executing in a controller, for example. Accordingly, the claimed invention views each task as part of a coupled system, not simply a series of independent tasks that need to be executed in the fastest possible time. For example, claim 19 is allowable for reasons similar to claim 5.

Also, claim 6 relates to a particular approach to adjusting the scheduling of tasks. The Office Action asserts that Lee teaches the scheduling of tasks in column 7, lines 38-45. Applicant notes that such disclosure of Lee relates to the adding, deleting or modifying of resources, and not tasks, as asserted in the Office Action. Further, claim 6, for example, does not simply generally recite the scheduling of tasks, but relates to adjusting the scheduling of tasks in a particular manner. Lee nor Dentler teach such claimed specifics.

The Examiner is also respectfully requested to reconsider the rejection of claim 22. For example, claim 22 recites the tool replenishment timer portion replenishing the controller countdown timer portion so long as the controller device and the control systems tool are in communication. The teachings of Dentler in column 11 surely cannot be fairly interpreted to

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teach such features. Dentler appears to merely teach that the display updates itself automatically on a timer interval.

Withdrawal of the rejection under 35 U.S.C. §103 is respectfully requested.

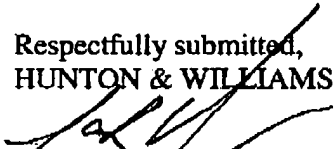
D. Conclusion

For at least the reasons outlined above, Applicant respectfully asserts that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

For any fees due in connection with filing this Response the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,
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